ABSTRACT OF THE DISCLOSURE

A method and workstation for optimizing chemical processes based on combinatorial chemistry, automation technology, and computer-controlled design is disclosed. The workstation includes a synthesizer, an analyzer, a robot and computer in communication with the synthesizer and analyzer. The computer includes one or more programs for regulating reaction parameters such as temperature, pressure, concentration of reagents and employs statistical methods for optimizing multiple reaction parameters and for designing optimized experiments for further investigation.